How big data can help save the world

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by Sara Del Valle

Our ability to collect data far outpaces our ability to fully utilize it—yet those data may hold the key to solving some of the biggest global challenges facing us today.

Take, for instance, the frequent outbreaks of waterborne illnesses as a consequence of war or natural disasters. The most recent example can be found in Yemen, where roughly 10,000 new suspected cases of cholera are reported each week—and history is riddled with similar stories. What if we could better understand the environmental factors that contributed to the disease, predict which communities are at higher risk, and put in place protective measures to stem the spread?

As a data scientist for Los Alamos National Laboratory, I study data from wide-ranging, public sources to identify patterns in hopes of being able to predict trends that could be a threat to global security. Multiple data streams are critical because the ground-truth data (such as surveys) that we collect is often delayed, biased, sparse, incorrect or, sometimes, nonexistent.

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